

WHAT IS CLAIMED IS:

1. An image sensing apparatus comprising:
 - an image sensing device which outputs image data obtained by an image sensing element;
 - 5 a white balance integration device which integrates the image data output from said image sensing device for white balance processing;
 - a display device which displays an object image during imaging on the image sensing element; and
- 10 a control device which causes said white balance integration device to perform integral processing for the image data during read of an image signal from the image sensing element, and causes said display device to display the object image at least after the integral processing ends.
- 15
2. An image sensing apparatus comprising:
 - an image sensing device which reads an image signal corresponding to an object image from an image sensing element, and outputs first image data;
 - 20 a white balance integration device which integrates the first image data output from said image sensing device for white balance processing;
 - a display device which displays the object image during imaging on the image sensing element;
- 25 a image processing device which generates second image data on the basis of the first image data output from said image sensing device; and

a control device which causes said white balance integration device to perform integral processing for the first image data during read of the image signal from the image sensing element, causes said image

5 processing device to perform image processing of previous image data before the first image, and causes said display device to display the object image during imaging on the image sensing element after the integral processing and the image processing end.

10 3. The apparatus according to claim 2, wherein the first image data includes image data having a signal amount corresponding to a color filter of the image sensing element, and

the second image data includes image data capable

15 of confirming the object image.

4. The apparatus according to claim 2, wherein the apparatus further comprises a defect correction device which corrects a defective pixel portion of image data when the image sensing element

20 has a defective pixel, and

the said control device controls said defect correction device so as to correct a defective pixel portion of the first image data after causing said display device to display the object image during

25 imaging on the image sensing element.

5. The apparatus according to claim 2, wherein the apparatus further comprises a defect

correction device which corrects a defective pixel portion of the image data when the image sensing element has a defective pixel, and a coefficient calculation device which calculates a white balance coefficient for white balance processing on the basis of an integral result of said white balance integration device,

5 said image processing device performs image processing including the white balance processing using
10 the white balance coefficient, and

15 said control device controls said defect correction device so as to correct a defective pixel portion of the first image data, and said coefficient calculation device so as to calculate the white balance coefficient after causing said display device to
20 display the object image during imaging on the image sensing element.

6. The apparatus according to claim 2, wherein
25 the apparatus further comprises a thumbnail image generation device which generates a thumbnail image on the basis of the first image data, and

30 said control device controls said thumbnail image generation device so as to generate the thumbnail image after causing said display device to display the object image during imaging on the image sensing element.

35 7. The apparatus according to claim 2, wherein
 the apparatus further comprises a defect

correction device which corrects a defective pixel portion of image data when the image sensing element has a defective pixel, and

 said control device controls said defect

5 correction device so as to correct a defective pixel portion of the first image data before causing said image processing device to start the image processing after causing said display device to display the object image.

10 8. The apparatus according to claim 2, wherein further comprising a temporary storage device which temporarily stores at least two first image data and one second image data.

9. The apparatus according to claim 1, wherein said
15 control device so controls as to start processing of a thumbnail image generation device or said image processing device at any one of a timing at which a mode is changed to another photographing mode, a timing at which power-off is designated, a timing at which the
20 mode is changed to a mode other than a photographing mode in which photographing is performed, a timing at which calculation of a white balance coefficient of a photographed image and correction of a defective pixel end upon reception of a display instruction of the
25 photographed image on said display device after photographing, a timing at which a photographing instruction switch is released, a timing at which a

predetermined time has been elapsed after the
photographing instruction switch is released, and a
timing at which a predetermined time has been elapsed
after a photographing preparation instruction switch is
released.

- 5 10. The apparatus according to claim 1, wherein when
display operation of said display device stops, said
control device so controls as to start processing of a
thumbnail image generation device or said image
processing device at any one of a timing at which a
mode is changed to another photographing mode, a timing
at which power-off is designated, a timing at which the
mode is changed to a mode other than a photographing
mode in which photographing is performed, a timing at
15 which calculation of a white balance coefficient of a
photographed image and correction of a defective pixel
end upon reception of a display instruction of the
photographed image on said display device after
photographing, a timing at which a photographing
20 instruction switch is released, a timing at which a
predetermined time has been elapsed after the
photographing instruction switch is released, and a
timing at which a predetermined time has been elapsed
after a photographing preparation instruction switch is
25 released, and when said display device displays the
object image, said control device so controls as to
start processing of the thumbnail image generation

device or said image processing device at any one of
the timing at which the mode is changed to another
photographing mode, the timing at which power-off is
designated, the timing at which the mode is changed to
5 a mode other than the photographing mode in which
photographing is performed, and the timing at which
calculation of the white balance coefficient of the
photographed image and correction of the defective
pixel end upon reception of the display instruction of
10 the photographed image on said display device after
photographing.

11. An image sensing apparatus comprising:
an image sensing device which converts light from
an object into image data, and outputs the image data;
15 a display device which displays the image data
obtained by said image sensing device;
an image processing device which performs image
processing for the image data obtained by said image
sensing device; and
20 a control device which causes said image
processing device to perform processing for the image
data during read of image data of a first object from
said image sensing device, causes said display device
to display image data of a second object after end of
25 reading the image data of the first object, and so
controls as to perform image processing for the image
data of the first object after end of displaying the

image data of the second object.

12. The apparatus according to claim 11, further comprising a switching device which switches between read of all pixels as read of the image data of the
5 first object, and cumulative read or interlaced read as read of the image data of the second object.

13. The apparatus according to claim 11, wherein the image processing includes integral processing of image data for white balance processing.

10 14. The apparatus according to claim 13, wherein
said image sensing device reads out image data of
one frame in two fields, and
said image processing device performs integral
processing of the image data before completion of read
15 in the two fields.

15. The apparatus according to claim 13, wherein the image data of the second object is processed with the same white balance as a white balance of the image data of the first object.